

MOVING EDUCATION FORWARD WORLDWIDE



Professional development helps drive student achievement and economic empowerment

The ubiquity of technology is changing the world we live in at an ever-increasing rate. As a result, new industries are emerging, world-changing innovations are deploying, and new jobs are being created. Today, businesses, even entire industries, can sometimes rise and fall in a relatively short period of time. These changes, while exciting, also put growing pressure on youth to develop skills that will prepare them to keep pace with the evolving opportunities.

Our successful response starts with education. Today's students will be the innovators of tomorrow, and if our schools and teachers are to adequately prepare them, new instructional approaches, skills, and pedagogies will be needed. Educators are the heart of this process, and we must provide them the tools and support they require to successfully contribute to educational transformation that improves student outcomes.

Innovation is opening up new avenues for learning and economic empowerment for millions around the world. Those willing to lead will set themselves apart by helping define how we turn these opportunities into real and lasting progress.

Preparing teachers to lead the way

Current global employment numbers are not encouraging. The International Labour Organization estimates that 75 million young people are currently unemployed worldwide.¹ In a frustrating paradox, companies actually have jobs to fill, underscoring a nagging skills gap among job seekers.

New pedagogies, new opportunities

Clearly, changes are needed in what is taught and how it is evaluated so that educators can better align teaching and learning to 21st century skills. They must also acquire new skills of their own to address a growing list of new teaching styles and pedagogies, including:

- Mobile learning
- Blended learning
- Project-based learning
- Differentiated learning
- Online learning, including massive open online courses (MOOCs)

While driving many of these changes, technology also provides an effective means for responding. New hardware, new software, new devices, and other innovations can equip us to better and more rapidly direct this educational evolution and respond to new and emerging opportunities for student success.

The case for teacher professional development

Research in the United States has demonstrated that differences in the effectiveness of teachers is the single most important factor driving students' academic growth from year to year.² Achieving the desired level of student success is only possible through highly effective teaching, which is itself supported by sustained, high-quality professional development, both for individual teachers and as a part of effective teams.

THE POWER OF PROFESSIONAL DEVELOPMENT

- Teachers who receive substantial professional development—an average of 49 hours—can boost their students' achievement by about 21 percentile points.³
- Researchers have found that the results of a single ineffective teacher remain measurable even four years later.⁴
- A Stanford University study linked highly cognitive teaching and learning in elementary and secondary schools directly to economic growth and the health of states and nations.⁵

Professional development at work

How can educators design and practice teaching and learning that leads to more successful futures for all students?

The New Pedagogies for Deep Learning project offers one way. The international, multifaceted collaboration aims to demonstrate how the potential for deep learning can be realized through new methodologies and accelerated by technology. Deep learning includes:

- Character education
- Citizenship
- Communication
- Critical thinking and problem solving
- Collaboration
- Creativity and imagination

Grounded in a strategy of purposeful learning by doing, the effort seeks to cultivate the most promising cases of new teaching approaches and deep learning. The goals go far beyond the essentials of literacy and numeracy and will require new approaches to teaching and learning.

Pieces of the training puzzle

Formal systems for ongoing professional development are critical to the educational transformation necessary to move education forward across the planet. An effective strategy for development includes:

- Structures and resources to support recruitment of promising teachers
- High-quality teacher preparation programs
- Ongoing, collegial professional learning, often folded into the school day and in professional learning communities
- An openness on the part of educators for growth and change, often fostered in part by a school culture that actively engages teachers in a professional learning community focused on continuous improvement

The Intel commitment to teachers

Intel firmly believes teachers will play a central role in moving education forward. That is why Intel is committed to ensuring and strengthening professional development and teacher readiness as critical success factors for education reform and transformation.

As an employer, Intel also relies on a skilled workforce. That need informs the company's efforts to help educators effectively integrate technology into their classrooms and promote student-centered approaches. By using technology to help teachers cultivate skills sought after in the global economy, Intel seeks to benefit students, companies, and society at large.

More than 12 million teachers trained

In more than a decade, Intel has delivered ongoing teacher professional development to more than 12 million teachers, in 35 languages, in 70 countries around the world. That deep experience has helped make Intel a trusted advisor when it comes to delivering the professional development educators need to create classroom environments and personalized learning experiences that power student success.

Maximizing the technology investment

While technology innovation creates exciting new educational opportunities, governments and today's education planners want to ensure that these technology investments are used effectively to reach educational and economic objectives.

Intel answers that need through proven education-focused technologies and a variety of professional development offerings that help educators use technology to increase student achievement, build 21st century skills, and become better teachers.



INTEL PROFESSIONAL DEVELOPMENT PROGRAMS

- Empower educators to effectively integrate technology in the classroom
- Engage students in deeply relevant ways, including the appropriate use of technology for learning, creativity, and communication
- Prepare educators to move toward a student-centered environment that properly cultivates innovative learners and critical thinkers who can successfully compete in the 21st century economy
- Promote standards-aligned, project-based approaches to learning
- Deliver long-term value to meet educational demands now—and well into the future—by maximizing your technology investments
- Scale for impact and change

Working together to transform education

Intel believes in the power and the people of education. We know that the right technology can be transformative. That's why we are focused on empowering the people of education to be their very best for their students.

Intel teacher professional development programs

Intel® Teach

Intel Teach helps K-12 teachers in all subjects integrate technology effectively into their existing curriculum, focusing on their students' problem solving, critical thinking, and collaboration. Intel Teach Elements are free, just-in-time professional development courses that provide deeper exploration of 21st century learning concepts. It is the largest, most successful program of its kind. Learn more at intel.com/education/teach.

Teachers Engage

For all educators dedicated to transforming K-12 classrooms, this online community focuses on the effective use of technology, instructional design, project-based approaches, assessment of 21st century skills, and open-ended questioning. Learn more at engage.intel.com.

21st Century Teaching Resources

Intel offers a collection of online resources to help teachers play a critical role in facilitating learning activities and posing questions to take student thinking deeper. Available resources include online thinking tools, a library of assessments that address 21st century skills, a digital literacy guide, and more. Learn more at intel.com/teachers.

Intel® Education Mobile Learning

The pages, links, and resources presented in this resource assist educators currently teaching in mobile-enhanced environments as well as teachers hoping to adopt mobile learning practices and tools in their classrooms. The materials help educators understand and contribute to making learning truly personal and powerful. Learn more at intel.com/teachers.

New Pedagogies for Deep Learning

Intel is working together with global education stakeholders in this partnership to address a key education challenge: how educators can design and practice teaching and learning that leads to more successful futures for all students. The partnership aims to articulate and demonstrate how the true potential for learning can be realized through new pedagogies in a technology-rich society. Learn more at newpedagogies.org.

Collaborative Assessment Alliance

Intel, Microsoft, and Promethean launched this extension of the global Assessment and Teaching of 21st Century Skills (ATC21S), whose mission is to help education systems provide the collaborative assessment tasks and measures to guide teaching and learning of 21st century skills. Alliance members learn from creating the tasks, as well as formal learning support and networking with other Alliance members. Learn more at caa21.org.

Learn more at: intel.com/innovate/k12.



ADDITIONAL INFORMATION AND RESOURCES

General

Learn more about Intel® education programs and initiatives: intel.com/education.

Teachers

Explore additional information: intel.com/education/elements
intel.com/teachers
intel.com/education/teach

Government representatives

For more details: intel.com/education/transformation

1. Mourshed, Mona, and Diana Farrell, "Education to Employment: Designing a system that works;" Dominic Barton; McKinsey Center for Government, 2014.
2. Wright, S.P.; S.P. Horn; and W.L. Sanders, "Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation," Journal of Personnel Evaluation in Education, 1997.
3. Yoon, Kwang Suk, Teresa Duncan, Silvia Wen-Yu Lee, Beth Scarloss, and Kathy L. Shapley, "Reviewing the Evidence on How Teacher Professional Development Affects Student Achievement," Regional Education Laboratory at Edvance Research, Inc., 2007.
4. Sanders, W.L., and J.C. Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement," Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center, 1996.
5. Hanushek, L., and L. Woessmann, "Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation," NBER Working Paper 14633, 2009.

Copyright © 2015, Intel Corporation. All rights reserved. Intel and the Intel logo are trademarks of Intel Corporation in the U.S. and/or other countries. *Other names and brands may be claimed as the property of others. Programs of the Intel® Education Initiative are funded by the Intel Foundation and Intel Corporation.

